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ABSTRACT

To facilitate the education of the bilingual child (particularly the Indian or Spanish-speaking one), methods of teaching English as a second language should be applied at all educational levels and in all areas of learning. The bilingual student's academic success is closely related to his ability to understand and to use the dominant language. The ideal situation would be an integrated studies program wherein teachers from all disciplines would work together to assist the bilingual student in language development by preparing vocabulary lists, book lists, and procedural guides. General emphasis would be on teaching in ways which will reinforce and increase language skills while establishing subject matter in the minds of the students. Involving parents and the bilingual community in activities of the school can help the child adjust to the school setting and will reduce cultural interference at home. A selected bibliography of textual materials and methodology sources is appended. (JH)

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ENGLISH-AS-A-SECOND-LANGUAGE METHODS

IN THE EDUCATION

OF THE BILINGUAL CHILD

A general survey of how methods in English-As-A-Second language can be applied at all levels and in all areas of learning to facilitate the education of the bilingual child, with particular reference to the linguistic and cultural problems in the Southwest United States.

prepared for

THE NORTHERN ARIZONA SUPPLEMENTARY EDUCATION CENTER

by

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ENGLISH-AS-A-SECOND-LANGUAGE METHODS IN THE EDUCATION OF THE BILINGUAL CHILD

The teacher of non-English speaking children realizes that first of all he is a teacher of language, and secondly, a conveyor of culture. Subject matter and specific concepts within various disciplines must rank third, for without the medium of understanding and failing to bridge certain cultural differences, the student can never understand and absorb the specific content of the various subjects taught in school.

Reared among native speakers in the Spanish-speaking section of a small Southwest community, on an Indian reservation in the Western United States, or in the foreign-language neighborhood of a large city, the non-English speaking child is at least 2,000 words behind his English-speaking counterpart from the first day he enters school. This estimate may, in fact, be too conservative in our era of television and widespread travel experience. As early as 1928, following numerous studies of vocabulary of preschool children, the Child Study Committee of the International Kindergarten Union published a list of 2,500 words of highest frequency from a list of 7,000 different words used by preschool children.[1] From the 1930's through the 1950's, the statistical data on a multiplicity of different kinds of tests for measuring vocabulary of children and adults have appeared.

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[1] Child Study Com. of the Internat'l. Kindergarten Union, A Study of the Vocabulary of Children before Entering the First Grade, Baltimore, 1928.

Bryan gives statistics from two studies, his own and the Seashore-Eckerson.

VOCABULARY SIZE OF SCHOOL CHILDREN

Level	Seashore-Eckerson Median	Bryan Median
Grade II	21,900	4,080
III	25,600	11,615
IV	28,400	13,130
V	25,600	21,543
VI	34,000	25,573

Conservatively he concludes that, "children of Grades II-VI know at least 10,000 words."[2] But if one follows Seashore's method of counting basic and derived words separately, the figures go even higher. (A basic word is exemplified by ship, while shipment is a derived word.) Thus Seashore gives the following estimates based on this latter method:

Academic Level	Estimated Vocabulary Size
average first grader	24,000
average sixth grader	49,500
average high school student	80,000
average university student	157,000 [3]

In another study, Hartmann tested undergraduate college students majoring in industrial education on two different sets of tests and found a vocabulary size ranging from 72,000 to 232,000 words. This same investigator

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2 Fred E. Bryan, "How Large Are Children's Vocabularies?" Elementary School Journal, vol. 54, pp. 210-216, December, 1953.

3 Bryan, op. cit., p. 210.

found that experienced teachers in graduate school at Columbia University averaged an estimated vocabulary of 259,430 words.[4] This study also reports mean vocabulary figures for fourth grade children from six different studies with estimates ranging from 4,000 to 10,886 words.[5]

In regard to the relationship between speaking and reading vocabularies, Seegers and Seashore report:

> Even though a child's reading vocabulary in the first grade may be only a few hundred words, his reading vocabulary quickly catches up to his auditory recognition vocabulary so that by seventh grade there is a relatively slight discrepancy between them.[6]

In reference to college students he reports, "we have evidence that speaking and writing vocabularies are very large and overlap greatly."[7]

Compare these figures with those obtained from working with children for whom English is a second language. A study in the Laredo, Texas, Public Schools completed in the late 1930's mentions the 2,000 word handicap with which Spanish-speaking children in that area enter school, and provides a vocabulary learning list of slightly less than 2,000 words as a goal to be achieved in the grades Sub-1B to 4A.[8]

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[4] George W. Hartmann, "A Critique of the Common Method of Estimating Vocabulary Size, Together with Some Data on the Absolute Word Knowledge of Educated Adults", The Journal of Educational Psychology, vol. 32, ~~pp. 351-358~~ May, 1941, pp. 351-358.

[5] Hartmann, op. cit., p. 353.

[6] J. C. Seegers and R. H. Seashore, "How Large Are Children's Vocabularies? A Discussion", Elementary English, vol. 26, April, 1949, pp. 181-194.

[7] Ibid.

[8] Laredo Public Schools, A Comprehensive Vocabulary for Grades S1B to 4A, Division of Extension, University of Texas, n.d.

In testing the vocabulary of Bengali students of English in India, Michael West, the well-known British authority on teaching English as a foreign language, reported a vocabulary of some 5,000 words for students at the matriculation age.[9] This corresponds in size, by his estimates, to the vocabulary of a native speaker aged nine and a half years. He concludes that in the English-As-A-Foreign-Language situation where one cannot hope to achieve with the student what can be accomplished with the native speaker, the problem of vocabulary selection is very important and should ideally be based on the needs of the learner, but it is not always possible to anticipate these needs.[10]

Fries elaborates on the need for a well-chosen but limited vocabulary:

> For the teacher of English as a foreign language, then, we need first a restricted list of words in a limited range of "meanings,"-- not in all the senses in which these words may function for the natives' use of the language.[11]

Along with studies of vocabulary size have come various English word lists graded for both range and frequency, and arrived at through a variety of means, such as telephone conversations, undirected student writing samples of such things as notes and reports, wide samplings of printed material ranging from current magazines to the Bible and Shakespeare. Several of the lists overlap considerably in arriving at a core of English words, the indispensable 850 to 1,000 words without which it is almost impossible to express oneself in English.[12]

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9 Charles C. Fries, English Word Lists, American Council on Educatinn, Washington, D. C., 1940, p. 48.

10 Fries, op. cit., p. 61.

11 Fries, op. cit., p. 89.

12 Fries, op. cit., p. 74 et passim.

Clearly, since acquisition of vocabulary is a primary need for ESL learners, particularly beginners, it seems advisable to consider such word lists, including as soon as possible those words deemed "indispensable", adding next those considered "essential", and later, the "useful" items. But at the same time, special consideration must be given to the immediate needs and interests of the children by the addition of "special" words and phrases to their inventory.

Considering the correlation generally believed to exist between vocabulary size and general intelligence, or at least general ability to perform academically in the culture represented by the language, one can understand the great disadvantage placed upon non-English speakers from the moment they are placed in an English-speaking environment and expected to achieve academically. But even though the vocabulary level may be regarded as an estimator of general comprehension of English, no experienced teacher would set out on a campaign of adding a given number of words per day to the students' total inventory simply through teaching word lists, or even through showing the objects themselves or pictures of them. Obviously words must be acquired in meaningful situations as part of the total thought process as one talks and reads about things, people, places, and ideas.

Since the bilingual student's academic success is closely related to his ability to bridge the language-culture gap, and since language is the vehicle for transmitting course content as well as that abstraction called culture, it becomes an absolute necessity for this student to learn English as fast and as systematically as possible. In fact, throughout the first several years of his schooling (and perhaps through high school), so long

as he continues to move between the Anglo culture and his own (particularly if the latter is primitive or deprived), understanding and using English must remain the focal point in all his subject matter. Beginning with a language handicap and never completely integrating into the dominant culture, he will probably never achieve the language capacity of a native speaker of English.

Obviously the ideal solution to the problem of English as a second language lies in the complete integration of all ethnic and minority groups into the mainstream of American culture. This was the drastic but certainly complete solution for individuals from many different foreign countries who in years past have come to this country and, refusing the security of their own ethnic group in one of the large cities of our country, struck out individually or in small groups to get jobs and fit into local community life. Their children entered public schools and grew up completely adapted culturally and linguistically. Some individuals and some minority groups, however, are reluctant for various reasons to give up their cultural heritage and insist that it be maintained by their children. Such is their privilege in this free country. Particularly among primitive cultures, such as the American Indian, because education usually entails rejection of certain central features of the culture, the older generation finds education per se distasteful. The Indian child taught health at school and given care by the school nurse, will eventually reject the services of the medicine man if, as an adolescent, he suspects a case of appendicitis or has a diseased tooth he knows should be filled or removed. He may find, as he broadens his scope of knowledge, that his native language is inadequate to express

all the exciting ideas he is learning in his particular field of interest, say electronics.

Thus it is that certain cultural conflicts are bound to arise within the individual trying to operate between two cultures, and between generations in the native culture as the older generation sees the native ways being supplanted by Anglo education and culture. To suggest to the individual caught in the cross-fire that he should simply choose the best of each culture is to help him very little, for he knows that he cannot hang indefinitely suspended between the two, and that a step toward the new removes him that much farther from the old. It is this confused state of indecision, or the frustration resulting from attempting the impossible, which probably contributes to alcoholism in certain individuals.

As far as the bilingual teacher is concerned, his attitude of understanding the total problem and respecting the individual's right of choice will gain him the trust and confidence of the bilingual child; eventually that child may make his own decision regarding a goal in life and he will realize that he needs education to achieve his objectives. In the meantime, during the years at school, if the concentration has been on a planned sequence of language learning which extends into other discipline areas, the child will have the necessary language skill to go on and successfully complete vocational training or, perhaps, college. Otherwise, as he falls farther behind his grade level each year, he is prone to become a dropout and eventually a misfit in society, dissatisfied with the old culture and frustrated by the new.

English, then, is the most important tool of the teacher of bilingual students, and this is true for the high school mathematics teacher as well as for the teacher of beginning children. As if the language problem were not sufficient ~~problem~~ challenge, the bilingual teacher frequently has the cross-cultural problem of attitudes and adjustments to deal with. Unless the children are made to feel welcome and can be happy in the school environment, as well as being given a measure of success in achieving attainable goals, they are very apt to become sullen by the time they reach the upper grades, refusing to participate, frequently absent, and eventually dropping out of school. But with the feeling that they are accepted by their teachers and with the provision for carefully planned progress in language through the grades and even through high school, their chances for academic success should be nearly equal with those of most native speakers of English.

But is it not overly-restrictive to control vocabulary and plan carefully for additional language items each year? No, not from the standpoint that, under carefully controlled conditions, if the children are given the basic vocabulary with which to express themselves in English, if they are given the proper aural-oral practice to reinforce learning and instill confidence, and if in addition they are led by a capable teacher from actual experiences to vicarious experiences in books, so that besides learning the language they have ideas to express in the language, eventually some of them will reach the stage in learning from which they can take off by themselves without controlled guidance by the teacher. Provided that they have the necessary language facility and have been led to appreciate the worth and pleasure of books, some can open up their own new worlds. Those who have the

kind of character and other factors to motivate them can go on to success in chosen fields in the world of the dominant culture because they have mastered the basic tool with which to achieve education and social success--language.

The Primary Grades

When a child enters school knowing no English or only a few words, unless his teacher knows the child's native language, she may of necessity have to depend upon a teacher aide/older school children, or a community resource person who is a bilingual. In certain instances it will be necessary for the bilingual person to explain the use of toilet, lavatory, and cafeteria facilities as well as elementary safety procedures for bus, playground, and schoolroom, in the native language.

But soon the vocabulary and phrases of everyday activity may be taught in English. In fact, the child's first year in school may well center around his immediate school environment, his adjustment to it, and the English he needs to express these ideas:

1. HEALTH: general cleanliness, teeth brushing, use of toilet, periodic medical check-ups, shots, care of minor injuries
2. FOOD: manners, procedures, rules for eating in the cafeteria; names of a few basic foods such as milk, bread, butter.
3. SAFETY: rules to be obeyed on the school bus, on the playground, and in the halls and classrooms
4. NUMBERS: counting of objects
5. SCIENCE: aquarium, terrarium, etc.
6. PLAY: games involving simple numbers and language, or utilizing simple nursery rhymes; playground activities such as ball games.

Since her primary responsibility is teaching spoken English, the teacher at this level should be trained in phonetics and phonemics and should have a knowledge of the sound systems of both the native and target languages. She should be able to anticipate the sounds and combinations of sounds in English which will cause difficulty for the child either because they are lacking in the native language or because the similarity between a native and an English sound will cause native language interference in the learning of English.

Insofar as possible, the acquisition of words and phrases at this early stage should always be concrete; that is, it should be correlated with the objects and activities in question. As the words and actions are taught, they must be completely meaningful. The teacher will say the word or phrase, have the pupils repeat in chorus, in groups, individually, etc. If this procedure is followed under pleasant conditions by an alert teacher who knows when the students have tired and is prepared to substitute another form of activity, the students will find the transition into the second language pleasant and successful. The oral-aural method can be a deadly bore in the hands of an uninterested, imperceptive teacher. It requires alertness, enthusiasm, and stamina on the part of the teacher.

At this level the imaginative teacher has a wealth of language-learning activities to draw upon for a change of pace. Music can be a particularly happy reinforcement of language learning and of desired habits and skills. A simple nursery rhyme, "Here We Go Round the Mulberry Bush", can be sung and dramatized to teach skills such as these:

This is the way we COMB OUR HAIR
BRUSH OUR TEETH
WASH OUR FACE
WASH OUR HANDS
TIE OUR SHOES
BUTTON OUR COAT
and so on.

The next step, learning to read in the second language, may be difficult, particularly for students from a non-literate culture such as most American Indian cultures. Apparently incontrovertible evidence has never been attained as to the value of making a person literate first in his native language, then in a second language; but particularly if both languages use the same alphabet (Navaho, for instance, utilizes the Roman alphabet with certain modifications) it is possible with a bilingual primer to teach the child the relation between the spoken word and the written word in his native language. The assumption is that, having grasped this relationship in his native tongue, he will be more capable of accepting it in a second language.

Another concept concerning reading is that an established, workable phonic system should be thoroughly understood and used schoolwide throughout elementary and junior high school, or until such as time as the students have gained the ability to use a dictionary or other means to learn pronunciation of new words independently. Although a system such as the Initial Teaching Alphabet in the beginning stages of reading may speed up the process and permit original composition, it probably should not be used with bilinguals (at least not at this stage of experimentation and development of the ITA) since one of its primary virtues is enabling the child's reading and writing vocabularies to catch up with his oral one, and this factor does not exist with the bilingual student, at least not to any significant degree.

In recent years primary teachers of bilingual children have reacted against the fact that the textbooks for our school system are oriented to the dominant Anglo culture. It is true that textbooks, particularly in the area of social studies, in recent years have been careful to include anti-racial discrimination material, for instance, stories about Negroes who have made significant achievements, like Booker T. Washington and Marian Anderson, and they include units on the early history of America with illustrations of the homes and activities of the early Indians.

This is fine for the student who already has a degree of reading ability and acculturation, but the customs, habitat, and everyday activities of the Algonquin Indians of a century or so ago, or of Stone Age natives, make not much more sense to the Apache or Navaho child on his reservation than do the pictures of skyscrapers and ocean liners to the desert inhabitant who may never have visited a town of over 25,000 inhabitants, and that only a few times in his life. And the vocabulary of such stories at this stage of language learning may be too remote to be practical. If the first primer is to be in English, it ought to reflect realities from the child's culture. For the Spanish-speaking child this might mean a story centering around the Cinco de Mayo celebration. For the Navaho is might reflect the daily life of a grandmother who cares for her herd of sheep.

One social studies text for grade two lists 241 words "assumed to be known" at the beginning of the book; this list includes such words as letter, mill, pancake, picnic, postman, wheat, all of which would be alien in certain subcultures in the United States. In the same text, the 130 new words to be acquired during the reading of the book include baggage, engineer, conductor, dairy,

vacation, threshed, combine, (noun) tow, harbor, ocean, ships, freighter, cargo, tugs(noun).[13] An experienced teacher at this level may find in such a text too much new vocabulary to treat in any but a superficial way; and even with illustrations or motion pictures to supplement, he may find it unrealistic to expect his pupils to acquire and retain these words as meaningful items of a working vocabulary at this grade level.

No detailed description has been given of the kind of classroom procedure to be used with beginning and primary children, since oral pattern practice and elementary reading methods through such series as the Miami Linguistic Readers are generally known and easily available. A teacher who has not been trained in English as a Second Language can, if necessary, master the techniques of oral drill and pattern practice through reading Mary Finocchiaro's Teaching English as a Second Language in Elementary and Secondary Schools and through study of texts in English as a Second Language, a selected list of which appears at the end of this paper. Knowing the techniques, the teacher can adapt the content and patterns to the specific needs of her students.

The Elementary Level -- Grades 4 through 6

At this level, if proper training has been received in the previous grades, the child should begin to take a serious interest in the subject matter of such disciplines as mathematics and science, and should be beyond

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[13] Tiegs-Adams-Thomas Social Studies Series, Stories about Sally, Book 2, rev. ed., Ginn and Co., 1960.

the stage where all knowledge must be verbalized by him under careful tutelage. In other words, he should be able to do silent, independent reading so that he is learning and progressing at his own pace. It would be a mistake, however, to suddenly abolish the verbalization of knowledge in the classroom and depend heavily upon the written word. It has been noted in the past that the general curriculum planning for schools provides that beginning at the fourth grade a great deal of emphasis is placed upon individual reading and independent seat work. In many cases the bilingual child at this level is not yet ready to depend heavily upon books and silent reading, for his language proficiency is not yet at that level which will enable him to work independently. If the habit of oral expression which teachers have worked hard to achieve in the lower grades is suddenly ~~turned~~ discontinued, ~~off~~ the student may find himself frustrated by the accumulation of new vocabulary words in various texts, and may suffer from the lack of discussion periods in which the observant teacher picks up misunderstandings or gives needed amplification from the assigned reading and clarifies other matters. It is more important for the teacher of bilingual and/or underprivileged children than for the teacher of average native speakers to provide the opportunities for the students to verbalize knowledge. The teacher frequently needs to use necessary visual aids to stimulate curiosity or reinforce learning. It should be added that the use of audio-visual aids simply as time fillers is particularly a waste where bilingual children are concerned. Any film worth seeing or tape worth listening to should be carefully prepared for in advance for two reasons:

1. Recorded language is usually more difficult to understand than language at firsthand with the speaker in front of the room where watching him is a slight aid to understanding.

2. Unless prepared beforehand, the bilingual student may miss major points because of the language and the new concepts presented.

Under the unit method at this level, whether it be for health, science, or social studies, there are many kinds of suggested activities, most of which are readily adaptable by the teacher of bilingual children who keeps in mind always that fundamentally each lesson in every subject is a lesson in language, an exercise in communication of ideas. Because his bilingual students need continued verbalization, he should include in every unit enough of the kinds of activities to insure himself that his students are understanding and that they are continuing to improve their language skills of vocabulary acquisition and fluency of expression.

Let us consider, for example, various kinds of activities which are frequently used in a social studies unit at fourth grade and see how these may be used to develop language skills as well as social and cultural awareness and understanding:

1. SHARING: The child brings from home something connected with the unit. He explains it to the class and may place it on display as part of a class exhibit. The bilingual teacher will require the student to speak in complete sentences and will encourage other students to ask questions of their fellow student. She will make sure any new vocabulary words are written on the chalk board by the student.

2. CONSTRUCTION: The children may construct a postoffice in a corner of their room. The teacher will help the students beforehand to formulate vocabulary lists of items needed for the project. He will help them label constructed items, such as, for example, "MAIL BAG" or "COUNTER."

3. DRAMATIC ACTIVITIES: The children may act out the parts of postal employees and patrons at the postoffice they have constructed. The teacher may need to help the children learn, even memorize, their roles. The dramatization may be repeated by different groups, being repeated by the less able or shy members of the class after they have watched the performance by other students.

4. EXPERIMENTING: The children may have pieces of dry ice and regular ice for comparison and for determining the different qualities of each. The teacher will make sure the students learn vocabulary which will be used in oral and written reports of the experiment.

5. LISTENING: In connection with National Safety Week, a policeman may talk to the children regarding traffic rules and safety. The teacher will have conferred with the speaker beforehand and may have prepared a list of words and phrases. The teacher may, if he feels it necessary, prepare the children beforehand for asking questions of the speaker.

6. DISCUSSION: In all classroom discussions, the teacher should as much as possible, place the responsibility for carrying on the discussion upon the children. He should encourage them to ask one another questions and attempt to answer among themselves, with the teacher directing only as necessary. After the children have sufficient maturity and language ability to proceed without the teacher's close supervision, they may be assigned to small groups for activities like planning a bulletin board display or a letter of invitation.

7. FIELD TRIPS: If the children visit, say, an airport, the teacher will carefully prepare them beforehand with vocabulary reinforced with pictures. As a follow-up, he may request informal or formal class reports, oral and in writing.

8. ART EXPERIENCES: The children may produce art work inspired by the field trip. The teacher may ask students to show and discuss their pictures before the class.

9. WRITTEN LANGUAGE EXPERIENCES: Since bilingual children at this level are usually not ready for original composition, the teacher must carefully control the writing. For instance, by asking a series of properly sequenced questions and requiring complete sentences as answers, the teacher could help the students write a well-ordered paragraph. Thus, in regard to the airport visit the teacher could ask, (1) Where did our class go on Wednesday? (2) How did we go to the airport? (3) What did we do when we first arrived? (4) Where did we go after we left the manager's

office? (5) What did we see in the hangar? (6) Who showed us through the airplane? The answers to these questions might first be formulated by the class after they have thought about them, then a capable student may write the answers on the board in the form of a unified paragraph. This can be copied by the class. A second time this method is used the students may be able to complete the written process independently and silently.

Another form of controlled composition is a paragraph from the book with the key words (usually nouns and verbs) removed. The student copies the paragraph, filling in the blanks. He has previously read the material, it has been discussed in class, and the vocabulary of the blanks has been learned thoroughly. It is possible that the teacher will write a simplified form of the paragraph from the book, using shorter, less complicated sentences if she considers this necessary.

Another useful exercise in controlled writing is dictation. The paragraph may be from the text book or simplified as above. The teacher reads it to the children who concentrate only on listening. At the second reading the teacher proceeds slowly, reading in thought groups, including punctuation, giving time to write. A third, final reading is at normal speed, during which time the children proofread for punctuation and other errors. Two students may write at the board. Students may exchange papers for correction. Two different students will correct the board work.[14]

10. READING: If a suitable text for social studies or other subjects is not available and the teacher must use a standard textbook, he may find it necessary to prepare the students carefully for a reading assignment.

    First he may want to read aloud and explain part of the chapter, or give an overview or summary. Secondly, he should anticipate words the students do not know and which they might not understand. The teacher may realize that having taught the children to look up words in the dictionary does not always help the students because they may not comprehend the dictionary definition any more than they understood the word in question. The teacher should anticipate problem words, made a word list, and write, (or have the students help write) simplified definitions for these words. By compiling an extensive picture file, the teacher should have a resource from which to draw to explain many unfamiliar terms. The students should make picture dictionaries with simplified definitions for terms they need or want to know.

    Students should read aloud frequently so that the teacher may check their comprehension of assigned material. Use of a tape

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[14] Mary Finocchiaro, Teaching English as a Second Language, Harper and Bros., New York, 1958, pp. 156-157.

> recorder will not only stimulate interest but also help the student to improve his oral performance.

Frequently bilingual children have been singled out as proficient in mathematics although deficient in language skills. Actually an analogous situation may exist within the language arts. A bilingual student may be motivated to study and make 100% on a spelling test, but not know the meanings of the words and may be incapable of writing a coherent paragraph. The student was motivated in both cases to achieve a limited degree of success within an area which did not reflect language proficiency.

Now, under the current theory of modern mathematics, emphasis is no longer placed on the mechanical "memorize-and-do operations" but rather on first understanding and appreciating the processes under study, and then working for proficiency in solving problems. Students are expected to understand the "how" and the "why" of a given operation.[15]

Not only is abstract verbal reasoning expected of children at a fairly early age, but the author of one text on the teaching of the new math in the elementary school frankly admits certain expectations of entering children:

> Any boy or any girl who enrolls in the first grade without certain basic number skills will be temporarily, if not permanently, handicapped. Rote counting, simple enumeration, recognition of sizes of small groups, some knowledge of time, measurement of quantity, and approximation of size are important items in pre-school number experience. Each pupil's number vocabulary should include some simple quantitative expressions.[16]

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15 Clyde G. Corle, Teaching Mathematics in the Elementary School, The Ronald Press Co., New York, 1064, pp. 7-10.

16 Corle, op. cit., p. 13.

In certain cultures, particularly the primitive cultures of many American Indians, the preschool child is entirely lacking the social experiences related to mathematics concepts with which his Anglo counterpart enters kindergarten or first grade. He may be considered culturally deprived if he has not experienced financial responsibility, either individually through an experience such as using his own piggy bank, or in the family where, as a normal part of experience in Anglo culture, financial planning, budgeting, and discussions are commonplace. He is further deprived in his preschool preparation for mathematics if he is totally unfamiliar with the systems of weights and measures common in the dominant culture, if he has not traveled enough to have a clear concept of time, distance, space, and relative height, to mention some of the more common mathematical concepts of Anglo culture with which even preschool children are familiar but which may be almost totally lacking, for example,in Indian reservation culture.

Yet another factor of mathematics readiness cited by the same author is the emotional readiness of students: "Teachers must wait until pupils feel secure in class before pressing them for achievement in the abstractions of mathematics."[17] For this reason the bilingual child's mathematics training must be delayed until he has made the more basic linguistic and cultural adjustments which presuppose emotional adjustment.

Once his mathematics training has gotten under way, the new system

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17 Corle, op. cit., p. 14.

will stress the necessity for students' understanding number ideas, and to this end, "a considerable amount of attention must be given to the meanings of words used in relationships with numbers."[18] This is to say, the teacher must teach concepts, and these eventually become abstractions.

Thus even in mathematics the bilingual child needs all the language mastery he can acquire along with many concepts and experiences which may be totally lacking in his culture. Sophisticated number concepts may be completely alien to him because they are not only nonexistent in his native culture, but may be difficult if not impossible to express adequately in his native language. For the Navaho Indian who comes from a hogan where the family regulates its living habits by the sun, the idea of dividing time into isochronous units marked off on the face of a clock is new, and probably pointless.

It must be concluded that from the standards and prerequisites suggested for introduction to modern mathematics, many a bilingual child is underprivileged and neither experientially, nor emotionally, nor linguistically equipped to deal with the demands of the discipline, even at the lower levels of teaching. The teacher must therefore compensate for certain basic deficiencies before trying to use a beginning mathematics text. The teacher of modern mathematics needs to be a good language teacher, considering that, "from the beginning of mathematics instruction emphasis must be three-fold: (1) operations, (2) vocabulary, and (3) application."[19]

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[18] Corle, op. cit., p. 88.

[19] Corle, op. cit., p. 325.

The classroom teacher of the primary and elementary grades has an advantage in planning lessons and units, since he knows the overall needs of the class and of the individual children; he is cognizant of the understandings, skills, and attitudes which are expected at this grade level by school standards; and he knows the broad goals provided for by the state level planning. He may have some difficulty, however, in rectifying the goals of the various text books in spelling, reading, social studies, etc. which he has to use, with the long-range planning by the school system for the total language progress, year by year, of the bilingual child. Particularly if the child returns to a non-English speaking environmenment at the end of each day and for the summer months, his basic vocabulary and sentence patterns in English must be reinforced at intervals to ensure retention; this may have to be done at the expense of learning new material, but pedagogically speaking it is a sound and necessary procedure. This same process of periodic review will be necessary in junior high and high school, and may be even more crucial at these upper levels where the subject matter teacher tends to think in terms of his own discipline and plans his learning activities in that limited scope. The total amount of learning and the rate of new vocabulary acquisition are necessarily greater at this level.

The Junior High -- Grades 7 through 9

If the bilingual has remained within the same school system, and if the students in his school are predominantly from the same subculture, even though he has made steady progress, he will probably rate lower on achievement tests, particularly those heavily dependent upon language skills, than his

Anglo counterpart in a dominant culture situation. In many cases, at the junior high or high school stage, the bilingual will have to transfer to another school in which he will have as classmates native speakers of English.

If his training through the first six grades has been systematic and all other factors have been normal, he may be able to enter classes with native speakers and be reasonably successful without overwhelming academic difficulties; but in many cases, particularly those in which the cultural background has been a particularly strong deterrent to linguistic and general academic progress, the bilingual child may not be ready for this further adjustment expected of him. If an Indian, he is likely to withdraw in the classroom and eventually drop out of school. If a member of certain other minority groups, he may react in a belligerent fashion, becoming delinquent.

Some schools have tried to solve the problem of minority groups at this level through special reading and English classes which are a help since they generally concentrate on remedial reading and vocabulary acquisition. The English classes may also provide continued help in written composition. The student at this age should be able to write independently such things as book review and evaluations or criticisms of stories and other short literary pieces which have been the topic of class discussion.

Perhaps the greatest academic need now is intellectual growth and enrichment through wide reading. This can be encouraged by the English as well as the other subject teachers who may provide special materials in the classrooms as well as in the school library. The child may need to be given specific instructions on the use of the school library, and various

references particularly helpful to him should be specifically demonstrated to him. The bilingual child may need to be encouraged, even required, to use these resources, particularly until he is used to them.

The student with a positive attitude can continue to make progress in this kind of program, but in all his subjects he needs teachers who are language teachers as well as teachers of social studies, mathematics, industrial arts, home economics, and so on. That is, a perceptive teacher will make sure that various means are provided for helping the bilingual child understand assignments. This teacher may work with small groups in which the key words and ideas of a lesson are discussed and defined, ideally by the students themselves, and the teacher may help the students write simplified definitions. He will insist, at least in small group work, that the bilingual student continue to verbalize his knowledge as much as possible. The teacher may be able to arrange a "buddy" system, pairing a native speaker with a bilingual; used properly, this system can be a reinforcement, not a crutch, profitable, it is hoped, to both persons concerned.

For the student who continues his schooling in a predominantly subculture situation, ideally there will be an integrated studies program with the teachers from nearly all disciplines working together in planning common vocabulary lists and being helped by the English teacher with suggestions for suitable, diverse kinds of language activities. As an example, the science, social studies, and English teacher can work together in preparing booklists, topics, and procedural guides for a group of science students required to do research papers or projects. The English teacher

can help the students in the organization and research for their chosen topics.

All teachers, including the physical education and driver training teachers, can serve as good language models and should insist on good usage and adequate, grammatical expression of ideas in their classes. Each teacher can, as far as possible, give non-objective tests which require reasoned answers and which, even if they are short, should be complete sentences. Within each room the individual teacher ought to provide plenty of reading material at various levels of difficulty in keeping with the abilities of his students, attractively displayed, and including well-illustrated books and magazines. The teacher ought to encourage reading, possibly by piquing interest in special books and ideas and by giving extra credit for oral and written reports.

The general emphasis, then, is on comprehension of subject matter, on broadening [illegible] and deepening intellectual comprehension through auxiliary reading, and on expression of learning in ways that will reinforce and increase language skills at the same time establishing subject matter in the minds of the students.

The High School

Those students who enter high schools where they become a minority group must compete on fairly even terms with the native speaker of English. At this level students begin to select specialized courses such as aviation science or typing. With a sound background and a stable personality,

the bilingual student can probably master the specialized vocabulary in his field of interest, even if the day by day load is fairly large. The real danger may be in the underlying cultural attitude of not being oriented toward the future, of being satisfied with the here and now, of having no specific goals. More than the ordinary student he needs the help of guidance counselors in directing his aims, and in addition he needs their continued encouragement and support. Under ordinary circumstances, the bilingual who finds his academic work difficult may give up rather than seek help. This may be especially true when the bilingual is in classes where he is competing with the linguistically assured and frequently aggressive Anglo; the bilingual may sit back and refuse to contribute to class discussion because he is afraid of being laughed at or shy because of his background or reluctant because he feels he does not know as much as his garrulous classmates.

It thus behooves the subject matter teacher in a situation like this to encourage the bilingual student by finding out what special knowledge or talents he may have to contribute to the class and by creating situations for this student to express himself. Special oral class reports, with the teacher assisting the student's preparation and securing a tape recorder for the student's practice, files of illustrated material for the student to use as a supplement to the course work, vocabulary check lists which the student can work on with the teacher's help, and gentle but firm insistence that the student contribute regularly in class discussions are means of providing for his continued interest and steady progress in his classes.

With the bilingual even more than with the native speaker, the empathy of the teacher is of great importance.

Conclusion

Does this system sound too protective and unrealistic as life preparation for the bilingual? Or does it foster segregation in special classes when what the student needs most is to integrate and join the mainstream of culture in this country? The answer to both questions is, "Yes, to a certain degree, but what alternative exists?" One cannot force the bilingual child into absorption by the dominant culture. The unsuccessful experience of the Bureau of Indian Affairs in this respect has shown this rather clearly. Placing children in boarding schools away from home for nine months of the year and forbidding them to use their native language never solved either the cultural or the linguistic problem.

In time, over several generations, complete integration may take place. But so long as that day is remote, the schools may have no alternative to offering restricted achievement to the bilingual. The attainments of the majority of students may be limited, but they certainly represent a much more desirable situation than the alternative--dropping out of school in junior or senior high school. The bilingual's scholastic achievements will enable him to succeed in many choices of vocational schooling or business training; in some cases he will succeed in college. Thus the desired goal has been reached if the bilingual accepts the outlook of the dominant culture to the point of learning the concepts necessary for success in his education and if his English ability is such

that he can independently pursue knowledge and is equipped by his ~~txxx~~ schooling to go on to a job or advanced training.

Finally, a word may be said about the acculturation process and the responsibility of the teachers and schools in this matter. Most youngsters being educated today will, as adults, be much more receptive to the idea of education than their grandparents and parents have been. But many children at present are prohibited from doing their best in school because of the strain of cultural interference; for some children (among them capable students who would otherwise succeed) the situation may eventually lead to dropping out of school as soon as legally permissible. What can be done by the schools to ease this strain on bilingual children?

The school needs to involve the parents and the bilingual community in the life of the school. This should be begun on the day the child enrolls in school. Parents can be encouraged through community resource people, themselves bilingual, to come to school with the children, meet the teacher, and be guided through the school by bilingual aides. Signs in the native language may welcome these visitors. At times throughout the year the school may hold social events in which the parents participate either by helping serve refreshments, providing entertainment, or ~~working~~ assisting with the properties for a student play, to cite some examples. A few different parents may be asked to accompany the children on each field trip. Children may make illustrated booklets about the school for their parents, telling about the daily schedule, the services provided for the child at school, and summarizing important rules and procedures. Parents may be invited, in

conjunction with study units, to demonstrate costumes, skills, or processes to the class. In some cases the parents may be interested and the school able to offer night classes in English or other training to parents. Winning over the parents to the idea of education for their child may mean the difference between his dropping out of school and completing his education.

A SELECTED BIBLIOGRAPHY

General Text Material

Dixson, Robert J. Graded Exercises in English. Rev. ed. English as a Foreign Language Series. New York: Regents, 1959

_____. Modern American English. 4 vols. New York: Regents, 1962.

_____. Regents English Workbook: Grammar, Common Usage, Idioms, Vocabulary. 2 vols. New York: Regents, 1956

English Language Services, Inc. English 900. Collier-Macmillan English Program. 6 vols. New York: Macmillan, 1964.

_____. English This Way. 16 vols. New York: Macmillan, 1963-.

Ogden, C. K. Basic English: A General Introduction with Rules and Grammar. London: Kegan Paul, Trench, Trubner, 1944.

Richards, I. A. and Christine Gibson. English Through Pictures. 2 vols. New York: Pocket Books, Cardinal Edition, 1953-58. A First Workbook of English for Use with English Through Pictures, Book I. New York: Washington Square Press, 1960.

Rojas, Pauline M., Director; Charles C. Fries, Consultant; and Staff. Fries American English Series: For the Study of English as a Second Language. 11 vols. Boston: D. C. Heath, 1952-57.

Thorndike and Lorge. The Teacher's Word Book of 30,000 Words. Columbia U., New York, 1944.

Methodology

Dixson, Robert J. Practical Guide to the Teaching of English as a Foreign Language. New York: Regents, 1960.

Finocchiaro, Mary. Teaching English as a Second Language In Elementary and Secondary Schools. New York: Harper and Bros., 1958.

Language Learning: A Journal of Applied Linguistics. Ann Arbor, Michigan: Research Club in Language Learning. 4 issues a year.

Selected Articles from Language Learning. Series II: Theory and Practice in English as a Foreign Language. Ann Arbor, Michigan: Research Club in Language Learning, 1963.

Sizemore, Mamie, ed. A New Approach to Second Language Teaching, Phoenix, Arizona: [State Department of Public Instruction, Division of Indian Education], 1962.